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MAR 27 2013

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PPL companies

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Director of Engineering  
Kentucky Public Service Commission  
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March 27, 2013

RE: *An Investigation of the Reliability Measures of Kentucky's Jurisdictional Electric Distribution Utilities and Certain Reliability Maintenance Practices* - Administrative Case No. 2006-00494

Dear Mr. Willard:

Enclosed please find Louisville Gas and Electric Company's and Kentucky Utilities Company's 2012 Annual Reliability Report pursuant to the Commission's Order dated October 26, 2007 in the above referenced matter.

Should you have any questions concerning the enclosed, please contact me at your convenience.

Sincerely,

A handwritten signature in black ink that reads "Rick E. Lovekamp". The signature is written in a cursive, flowing style.

Rick E. Lovekamp

# KENTUCKY PUBLIC SERVICE COMMISSION

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## Electric Distribution Utility Annual Reliability Report

MAR 27 2013

### SECTION 1: CONTACT INFORMATION

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UTILITY NAME	1.1	Louisville Gas and Electric Company
REPORT PREPARED BY	1.2	Nelson Maynard, Director Reliability
E-MAIL ADDRESS OF PREPARER	1.3	nelson.maynard@lge-ku.com
PHONE NUMBER OF PREPARER	1.4	859-367-1107

### SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2012
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### SECTION 3: MAJOR EVENT DAYS

$T_{MED}$	3.1	5.562
FIRST DATE USED TO DETERMINE $T_{MED}$	3.2	1-Jan-07
LAST DATE USED TO DETERMINE $T_{MED}$	3.3	31-Dec-11
NUMBER OF MED IN REPORT YEAR	3.4	6

NOTE: Per IEEE 1366  $T_{MED}$  should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

### SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	97.11
SAIFI	4.2	1.153
CAIDI	4.3	84.24

Including MED (Optional)

SAIDI	4.4	150.91
SAIFI	4.5	1.443
CAIDI	4.6	104.61

#### Notes:

- 1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
- 2) Reports are due on the first business day of April of each year
- 3) Reports cover the calendar year ending in the December before the reports are due.
- 4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and  $T_{MED}$

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### SECTION 5: OUTAGE CAUSE CATEGORIES

Excluding MED

CAUSE CODE DESCRIPTION	SAIDI VALUE	CAUSE CODE DESCRIPTION	SAIFI VALUE
Animal	5.1.1 5.02	Animal	5.2.1 0.074
Construction	5.1.2 0.25	Construction	5.2.2 0.017
Lightning	5.1.3 11.21	Lightning	5.2.3 0.091
Non-Company	5.1.4 1.30	Non-Company	5.2.4 0.026
Unknown	5.1.5 18.51	Unknown	5.2.5 0.315
Overload	5.1.6 0.29	Overload	5.2.6 0.004
Planned Work	5.1.7 9.27	Planned Work	5.2.7 0.132
Trees	5.1.8 17.48	Trees	5.2.8 0.108
Utility Equip	5.1.9 28.28	Utility Equip	5.2.9 0.338
Vehicle	5.1.10 5.50	Vehicle	5.2.10 0.049

### SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER	SAIDI VALUE	MAJOR OUTAGE CATEGORY
BK0002	6.1.1 853.45	Utility Equipment
BK0001	6.1.2 851.17	Utility Equipment
MD1457	6.1.3 700.32	Lightning
AL1442	6.1.4 657.76	Trees
VE0003	6.1.5 577.21	Trees
CR1421	6.1.6 533.09	Planned Work
MK1299	6.1.7 528.16	Trees
MC1262	6.1.8 453.08	Trees
SM1360	6.1.9 438.50	Vehicle
AL1444	6.1.10 432.15	Lightning

CIRCUIT IDENTIFIER	SAIFI VALUE	MAJOR OUTAGE CATEGORY
SM1360	6.2.1 7.826	Utility Equipment
AK1290	6.2.2 6.952	Utility Equipment
MD1457	6.2.3 5.842	Vehicle
MK1299	6.2.4 5.431	Trees
LO1193	6.2.5 5.029	Utility Equipment
NA1266	6.2.6 4.448	Utility Equipment
FV1477	6.2.7 4.271	Non-Company
FV1476	6.2.8 4.215	Utility Equipment
CF1204	6.2.9 4.199	Utility Equipment
CY1481	6.2.10 3.903	Utility Equipment

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Additional pages may be attached as necessary

### SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

The Companies' Vegetation Management Plan was submitted December 19, 2007 and is referenced to the Reliability Report submitted April 1, 2008. The Distribution Vegetation Management Program encompasses right of way maintenance for Louisville Gas and Electric Company and Kentucky Utilities Company (referred to as the "Companies"). The program is centralized and managed by a Forestry Manager and eight company Utility Arborists. All are certified arborists by the International Society of Arboriculture.

The Companies' plan is to maintain a proactive trim cycle while balancing the reactive needs of worst performing circuits. The Companies' goal is to maintain an average trim cycle of five years or less. The effectiveness of the plan is evaluated by the cycle, system performance as measured by system SAIDI, SAIFI, and CAIDI.

#### **Effectiveness of the program:**

LG&E/ KU Tree Cycle - 4.87 years.  
LG&E Tree SAIDI - 17.48 minutes  
LG&E Tree SAIFI - 0.108  
LG&E Tree CAIDI - 161.85 minutes

The hazard tree program, mid cycle, herbicide, and worst performing circuits were completed as planned. Tree related SAIDI and SAIFI improved in 2012 compared to 2011. Tree CAIDI increased due to improvement in Tree SAIFI.

#### **Adjustments made to the tree plan in 2012 included:**

No changes made to plan.

#### **Changes to be implemented in 2013:**

No changes made to plan.

### SECTION 8: UTILITY COMMENTS

Overall SAIDI and SAIFI increased in 2012 compared to 2011 due to weather related events. CAIDI improved in 2012 over 2011. The top 10 Worst Performing Circuits for SAIDI and SAIFI have been evaluated for deficiencies. Corrective action was either completed in 2012 or planned and scheduled to be completed in 2013.